

WHAT IS CLAIMED IS:

1. Isolated biologically active human Apo-2 ligand comprising amino acid residues 114-281 of Figure 1A.
2. The Apo-2 ligand of claim 1 comprising amino acid residues 41-281 of Figure 1A.
3. The Apo-2 ligand of claim 2 comprising amino acid residues 15-281 of Figure 1A.
4. The Apo-2 ligand of claim 3 comprising amino acid residues 1-281 of Figure 1A.
5. Isolated biologically active human Apo-2 ligand having amino acid residues 1-281 of Figure 1A.
6. Isolated biologically active Apo-2 ligand having at least about 80% sequence identity with either of:
 - (a) the full-length native human Apo-2 ligand comprising amino acid residues 1-281 of Figure 1A;
 - (b) the extracellular region of native human Apo-2 ligand comprising amino acid residues 41-281 of Figure 1A; or
 - (c) the extracellular region of native human Apo-2 ligand comprising amino acid residues 114-281 of Figure 1A.
7. The Apo-2 ligand of claim 6 wherein said ligand has at least about 90% sequence identity with either of (a), (b), or (c).
8. The Apo-2 ligand of claim 7 wherein said ligand has at least about 95% sequence identity with either of (a), (b), or (c).
9. A chimeric polypeptide comprising the Apo-2 ligand of claim 1 fused to a heterologous polypeptide sequence.

10. The chimeric polypeptide of claim 9 wherein said heterologous polypeptide sequence is a tag polypeptide sequence.
11. An antibody which binds to Apo-2 ligand.
12. The antibody of claim 11 wherein said antibody is a monoclonal antibody.
13. Isolated nucleic acid encoding Apo-2 ligand.
14. The nucleic acid of claim 13 wherein said nucleic acid encodes the Apo-2 ligand of claim 1.
15. The nucleic acid of claim 13 wherein said nucleic acid encodes the Apo-2 ligand of claim 2.
16. The nucleic acid of claim 13 wherein said nucleic acid encodes the Apo-2 ligand of claim 5.
17. A vector comprising the nucleic acid of claim 13.
18. A host cell comprising the vector of claim 17.
19. A method of producing Apo-2 ligand comprising culturing the host cell of claim 18 and recovering the Apo-2 ligand from the host cell culture.
20. A composition comprising Apo-2 ligand and a pharmaceutically-acceptable carrier.
21. The composition of claim 20 wherein said Apo-2 ligand comprises the Apo-2 ligand of claim 1.

22. A pharmaceutical composition useful for stimulating mammalian cell apoptosis comprising an effective amount of Apo-2 ligand in a pharmaceutically-acceptable carrier.
23. A method of inducing apoptosis in mammalian cells comprising exposing mammalian cells to an effective amount of Apo-2 ligand.
24. A method of treating a mammal having cancer, comprising administering to a mammal diagnosed as having cancer an effective amount of Apo-2 ligand.
25. The method of claim 24 wherein the Apo-2 ligand is administered to the mammal in combination with one or more other therapies.
26. The method of claim 25 wherein said one or more other therapies are selected from the group consisting of radiation therapy, chemotherapy, TNF- α , TNF- β , CD30 ligand, 4-1BB ligand, and Apo-1 ligand.
27. The method of claim 24 wherein said cancer is breast cancer, prostate cancer or ovarian cancer.
28. An article of manufacture, comprising:
a container;
a label on said container; and
a composition contained within said container;
wherein the composition includes an active agent effective for inducing apoptosis, the label on said container indicates that the composition can be used to induce apoptosis, and the active agent in said composition comprises Apo-2 ligand.

29. The article of manufacture of claim 28 further comprising instructions for administering the Apo-2 ligand to a mammal.